

SEQUENCE LISTING

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Green, Jodie Lyn
Harrison, Stuart John

<120> ANTI-MICROBIAL PROTEIN

<130> CULLN18.1CP1C1

<150> 09/364395
<151> 1999-07-30

<150> 09/117615
<151> 1998-11-09

<150> PCT/AU97/00052
<151> 1997-01-31

<150> AU PN 7802
<151> 1996-01-31

<160> 21

<170> FastSEQ for Windows Version 4.0

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<211> 102
<212> PRT
<213> Macadamia integrifolia

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1 5 10 15
Ile Ala Met Ala Ser Glu Met Val Asn Gly Ser Ala Phe Thr Val Trp
20 25 30
Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu Arg Tyr Ser Lys Cys Gly
35 40 45
Cys Ser Ala Ile His Gln Lys Gly Gly Tyr Asp Phe Ser Tyr Thr Gly
50 55 60
Gln Thr Ala Ala Leu Tyr Asn Gln Ala Gly Cys Ser Gly Val Ala His
65 70 75 80
Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys Asn Pro Phe Gly Trp Lys
85 90 95
Ser Ile Phe Ile Gln Cys
100

<210> 2
<211> 493
<212> DNA
<213> Macadamia integrifolia

<220>
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<222> (70)...(375)

<223> y=t or c.

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acccctcagcc atg gct tcc acc aag ttg ttc ttc tca gtc att act gtg atg	111	
Met Ala Ser Thr Lys Leu Phe Phe Ser Val Ile Thr Val Met		
1 5 10		
atg ctc ata gca atg gca agt gag atg gtg aat ggg agt gca ttt aca	159	
Met Leu Ile Ala Met Ala Ser Glu Met Val Asn Gly Ser Ala Phe Thr		
15 20 25 30		
gta tgg agt ggt cca ggt tgt aac aac cgt gct gag cga tat agc aag	207	
Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu Arg Tyr Ser Lys		
35 40 45		
tgt gga tgc tca gct ata cat cag aag gga ggc tat gac ttc agc tac	255	
Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr Asp Phe Ser Tyr		
50 55 60		
act gga caa act gct gct ctc tac aac cag gct gga tgc agt ggt gtt	303	
Thr Gly Gln Thr Ala Ala Leu Tyr Asn Gln Ala Gly Cys Ser Gly Val		
65 70 75		
gca cac acc agg ttt ggg tcc agt gcc agg gca tgc aac cct ttt ggt	351	
Ala His Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys Asn Pro Phe Gly		
80 85 90		
tgg aag agt atc ttc atc caa tgc tagatttcat aactcttgaa tccatcttct	405	
Trp Lys Ser Ile Phe Ile Gln Cys		
95 100		
atgttttca agtgtataat tagagagatg catggatata taataaataa gtaaaagcta	465	
cgttatcacc atgtgatgat ttttyaccc	493	
<210> 3		
<211> 19		
<212> DNA		
<213> Artificial Sequence		
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<223> Degenerate primer alpha.		
<400> 3		
ccgaaggcagt tgcabgcbc	19	
<210> 4		
<211> 20		
<212> DNA		
<213> Artificial Sequence		
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<223> Degenerate primer beta.		
<400> 4		
gagmgktatw skaagtgtgg	20	

<210> 5
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> 3' RACE primer alpha.

<400> 5
tgctctctac aaccaggctg 20

<210> 6
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> 5' RACE primer beta.

<400> 6
gcattggatg aagataactc 19

<210> 7
<211> 36
<212> DNA
<213> Artificial Sequence

<220>
<223> 5' RACE primer to anneal with poly-C-tailed cDNA
primer alpha.

<221> misc_feature
<222> (0)...(0)
<223> n = inosine

<400> 7
ggccacgcgt cgactagtac gggnnnnnnn gggnnng 36

<210> 8
<211> 20
<212> DNA
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<220>
<223> Mi28K primer. Mismatched oligonucleotide
containing a mutation of the MiAMPl coding
sequence from amino acid Q(position 28) to K.

<400> 8
gctatacata aaaaggagg 20

<210> 9
<211> 20
<212> DNA
<213> Artificial Sequence

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<220>
<223> Mi39K primer. Mismatched oligonucleotide containing a mutation of the MiAMP1 coding sequence from amino acid Q(position 39) to K.

<400> 9
tacactggaa aaactgctgc

20

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<210> 10  
<211> 24  
<212> DNA  
<213> Artificial Sequence
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<220>
<223> Mi46K primer. Mismatched oligonucleotide containing a mutation of the MiAMP1 coding sequence from amino acid Q(position 46) to K.

<400> 10
qcatccagct ttgttgtaga gagc

24

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<210> 11
<211> 24
<212> DNA
<213> Artificial Sequence
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<220>
<223> Mi54V primer. Mismatched oligonucleotide
containing a mutation of the MiAMP1 coding
sequence from amino acid H(position 54) to V.

<400> 11
qgtgttgacg tgaccaggtt tggg

24

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<210> 12
<211> 24
<212> DNA
<213> Artificial Sequence
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<220>
<223> Mi54K primer. Mismatched oligonucleotide
containing a mutation of the MiAMP1 coding
sequence from amino acid H(position 54) to K.

<400> 12
qqtqttqcaa aaaccaggtt tggg

24

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<210> 13  
<211> 31  
<212> DNA  
<213> Artificial Sequence
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<220>
<223> Oligonucleotide primer from the 5' coding region
of MiAMP1 (Mil primer).

<400> 13

acaccatatg agtgcattta cagtatgagt g

<210> 14
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Oligonucleotide primer from the 3' coding region
of MiAMP1 (Mi2 primer).

<400> 14
gaagagtatc ttcatccaat gctaaggatc cacac

35

<210> 15
<211> 76
<212> PRT
<213> Artificial Sequence

<220>
<223> Mi28K variant. Variant MiAMP1 protein Mi28K
containing a Lysine at amino acid 28 (used primer
from SEQ ID NO:8 to produce).

D
O
C
E
P
T
-
D
E
A
C
O
D

<400> 15
Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu
1 5 10 15
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Lys Lys Gly Gly Tyr
20 25 30
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Gln Ala Gly
35 40 45
Cys Ser Gly Val Ala His Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
50 55 60
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
65 70 75

<210> 16
<211> 76
<212> PRT
<213> Artificial Sequence

<220>
<223> Mi39K variant. Variant MiAMP1 protein Mi39K
containing a Lysine at amino acid 39 (used primer
from SEQ ID NO:9 to produce).

<400> 16
Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu
1 5 10 15
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr
20 25 30
Asp Phe Ser Tyr Thr Gly Lys Thr Ala Ala Leu Tyr Asn Gln Ala Gly
35 40 45
Cys Ser Gly Val Ala His Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
50 55 60
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
65 70 75

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<210> 17
<211> 76
<212> PRT
<213> Artificial Sequence

<220>
<223> Mi46K variant. Variant MiAMP1 protein Mi46K containing a Lysine at amino acid 46 (used primer from SEQ ID NO:10 to produce).

<400> 17
Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu
1 5 10 15
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr
20 25 30
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Lys Ala Gly
35 40 45
Cys Ser Gly Val Ala His Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
50 55 60
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
65 70 75

<210> 18
<211> 76
<212> PRT
<213> Artificial Sequence

<220>
<223> Mi54V variant. Variant MiAMP1 protein Mi54V containing a Valine at amino acid 54 (used primer from SEQ ID NO:11 to produce).

<400> 18
Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu
1 5 10 15
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr
20 25 30
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Gln Ala Gly
35 40 45
Cys Ser Gly Val Ala Val Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
50 55 60
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
65 70 75

<210> 19
<211> 76
<212> PRT
<213> Artificial Sequence

<220>
<223> Mi54K variant. Variant MiAMP1 protein Mi54K containing a Lysine at amino acid 54 (used primer from SEQ ID NO:12 to produce).

<400> 19
Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu

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1	5	10	15
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr			
20	25	30	
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Gln Ala Gly			
35	40	45	
Cys Ser Gly Val Ala Lys Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys			
50	55	60	
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys			
65	70	75	

<210> 20

<211> 76

<212> PRT

<213> Artificial Sequence

<220>

<223> Mi46K/54V variant. Variant MiAMP1 protein
Mi46K/54V containing a Lysine at amino acid 46 and
a Valine at amino acid 54.

<400> 20

Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu			
1	5	10	15
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr			
20	25	30	
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Lys Ala Gly			
35	40	45	
Cys Ser Gly Val Ala Val Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys			
50	55	60	
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys			
65	70	75	

<210> 21

<211> 76

<212> PRT

<213> Artificial Sequence

<220>

<223> Mi46K/54K variant. Variant MiAMP1 protein
Mi46K/54K containing a Lysine at amino acid 46 and
a Lysine at amino acid 54.

<400> 21

Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu			
1	5	10	15
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr			
20	25	30	
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Lys Ala Gly			
35	40	45	
Cys Ser Gly Val Ala Lys Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys			
50	55	60	
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys			
65	70	75	